Subpubic and suprapubic cartilaginous cysts

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Section: Musculoskeletal system
Area of Interest: Bones
Procedure: Diagnostic procedure
Technique: MR
Special Focus: Cysts Case Type: Clinical Cases
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Patient: 84 years, female

Clinical History:
An 84-year-old woman, with history of 3 gestations, presented to her physician with a non-painful vulvar slow-growing mass that had developed over approximately eighteen months.

Imaging Findings:
A MRI of the pelvis was performed using intravenous gadolinium contrast. Two well-defined masses were identified in close relationship with the symphysis pubis; an inferior one measuring 30 x 34 x 32 mm, and a superior one measuring 25 x 17 x 15 mm (Fig. 1). The lesions showed similar intensity pattern on the various sequences, low signal intensity on T1-weighted sequences (Fig. 2 a and c), and a heterogeneous high signal on T2-weighted images (Fig. 3). There was no contrast enhancement in the lesions themselves, however, there was some marginal soft rim enhancement (Fig. 2 b and d).

Discussion:
Subpubic and suprapubic cartilaginous cysts are rare cystic lesions originating from the symphysis pubis, which present as a vulvar or pubic mass and/or chronic abdominal pain [1]. These lesions consist of a collagenous capsule containing fibrocartilaginous tissue with extensive mucinous cystic degeneration [2]. They are more common in women and there is an association with pregnancy, vaginal delivery and pelvic trauma [1-5]. They are believed to be the result of pubic symphysis degeneration.
The main complaints of the patients with this type of lesion are pain, painless vulvar mass, dyspareunia, or obstructive voiding symptoms up to acute urinary retention [1-8].

MRI demonstrates the origin of the cysts from the symphysis pubis [1, 2] allowing differential diagnosis with other vulvar masses, such as lipomas, Nabothian cysts, Bartholin cysts, Gartner cysts, squamous cell carcinoma, Bartholin’s gland carcinoma, basal cell carcinoma or vulvar melanoma. CT and ultrasound can also help [4, 6]. The lesion is usually hypointense relative to muscle on T1-weighted sequences and heterogeneously hyperintense on T2-weighted sequences. After administration of IV gadolinium, a thin enhancing wall with no internal enhancement can be seen [2].

Although some advocate surgical treatment [4, 8], there is risk of complications, such as symphysiolysis [7] and infection [3]. Aspiration and steroid injection can be performed but recurrence is reported [7]. As these lesions are benign, patient management should be guided by patient’s symptoms and conservative treatment considered [3, 4]. Subpubic and suprapubic cartilaginous cysts are rare lesions, but should be considered in the differential diagnosis of vulvar and pubic masses. MRI can depict the relationship with the symphysis pubis and help make the diagnosis,
avoiding unnecessary diagnostic procedures. Patient management should be guided by patient’s symptoms, as these are benign lesions.

**Differential Diagnosis List:** Subpubic and suprapubic cartilaginous cysts, Lipomas, Nabothian cyst, Bartholin cyst, Gartner cyst

**Final Diagnosis:** Subpubic and suprapubic cartilaginous cysts

**References:**


Figure 1

Description: Coronal T2-weighted MRI shows two well-delineated lesions (arrows) arising from the superior and inferior aspect of the symphysis pubis. Origin: Oliveira I, Department of Radiology, Hospital de São João, Portugal
Figure 2

Description: Non-enhanced T1-weighted MRI shows low signal intensity by the superior (A) and inferior (C) lesion. Contrast-enhanced fat saturated T1-weighted MRI shows no enhancement by both the superior (B) and inferior (D) lesions. 

Origin: Oliveira I, Department of Radiology, Hospital de São João, Portugal
Figure 3

Description: Axial T2-weighted MRI shows heterogeneous high signal of both the superior lesion (arrows A and B) and the inferior cartilaginous cysts (arrows C and D). Origin: Oliveira I, Department of Radiology, Hospital de São João, Portugal.